

PITONGA GEN. NOV., A SPIDER (AMAUROBIIDAE : DESINAE) FROM  
NORTHERN AUSTRALIA.

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ABSTRACT

A 3-clawed spider from the mangroves of the Northern Territory, Australia is described and provisionally placed in the Desinae. It has untoothed tarsal claws and a long inferior claw, a copulatory spur on ♂ tibia II and no serrula.

INTRODUCTION

These spiders were collected by members of the Australian Littoral Society during a survey of the mangrove areas of Northern Australia. The female was found in a crab-hole on the mud, the male walking on the mud and two of the three juveniles collected were in silk cells on the mangrove leaves along the river, the third on mud.

*Pitonga* gen. nov.

Medium sized, 3-clawed spider. Eyes small, in 2 almost straight rows occupying median third of head. Clypeus narrow. Promargin of chelicera with teeth, retromargin without teeth but with a secretory protuberance opposite last promarginal tooth. Labium and maxillae elongate, no serrula. Spinnerets sub-terminal; no colulus. Legs 1423, anterior trochanters un-notched. One long distal trichobothrium on metatarsi, none on tarsi. Male with thick spines on Tibia I and ventral spur-like spine on Tibia II.

'Pitonga' is an aboriginal word meaning mangrove.

*Pitonga woolowa* sp. nov.

Holotype: In crab hole on mud bank, Flying Fox Is., East Alligator River, Northern Territory, W. Houston, 15.vi.81, 1 ♀, QM S1300.

Paratypes: On mud, East Alligator River,

N.T., W. Houston, P. Davie, 23.vi.82, 1 ♂, QM S1301; in silk cells on mangrove (*Avicennia* sp.) leaves, 2 juvs QM S1302. On mud, Point Farewell, East Alligator River, N.T., W. Houston, P. Davie, 18.vi.82, 1 juv., QM S1303.

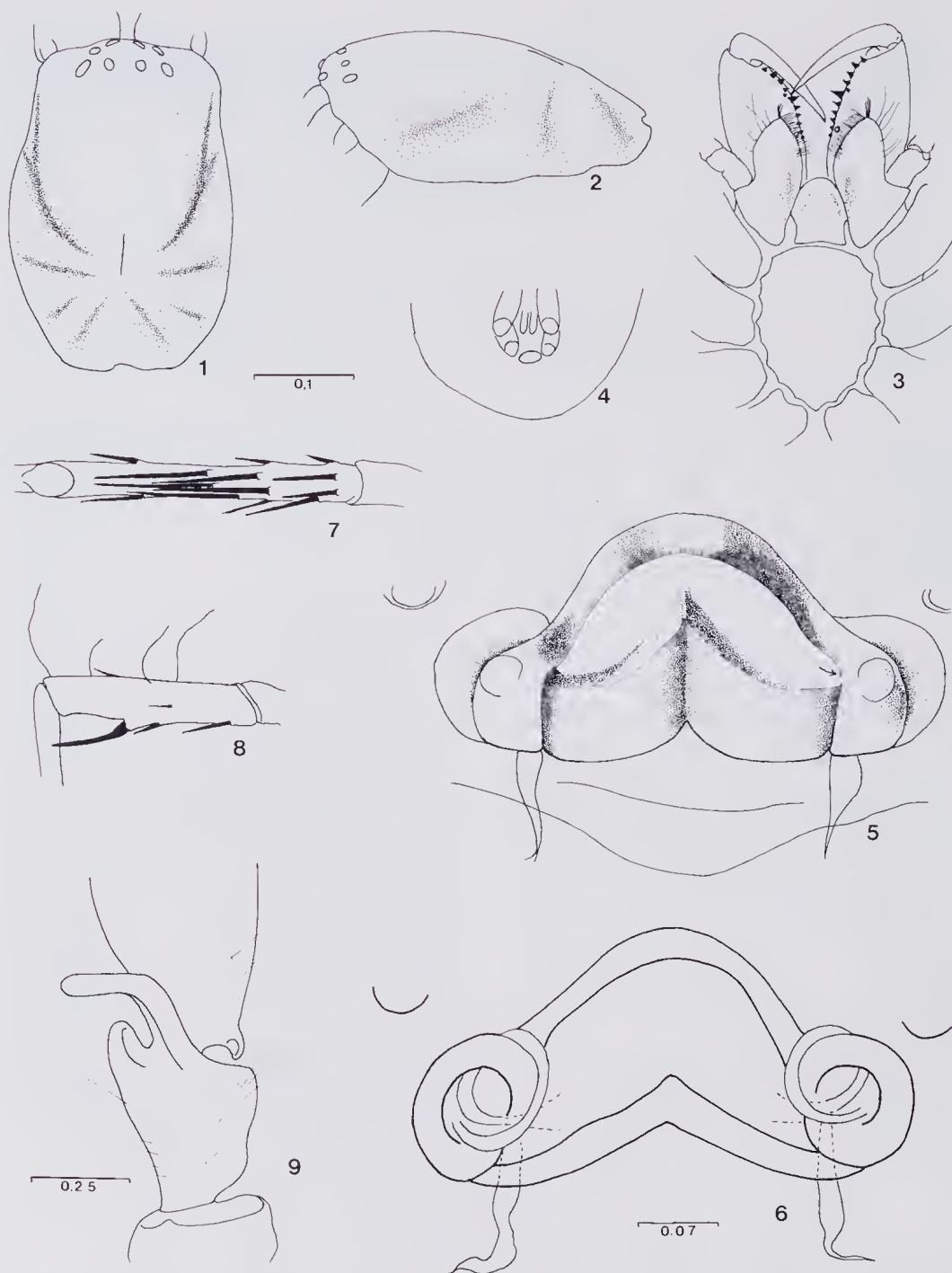
DESCRIPTION OF FEMALE

CL 3.13, CW 2.13, AL 2.87, AW 2.00 (abdomen shrunken).

Colour: The spider is pale and straw-coloured resembling *Clubiona*. Chelicerae, metatarsi and tarsi light brown. Closely adpressed hair on cephalothorax and abdomen, longer hairs on abdomen. Legs hairy, especially laterally on distal segments. Viewed from above anterior row of eyes slightly recurved, posterior row straight; from the front, anterior row straight, the posterior row procurved (Figs. 1, 2). Ratio of eyes AME:ALE:PME:PLE is 9:9:7:10. Clypeus narrower than diameter of AME. Chelicerae large and long (2.0 mm) with boss. Retromargin without teeth, promargin 10 teeth. Small medium tooth opposite 4-5 and retromarginal protuberance opposite the last promarginal tooth between which the tip of the fang rests (Figs. 3, 14). Magnification shows that this boss has regular pores opening on it (Fig. 15). Labium longer than wide 1:0.81. Sternum longer than wide 1:0.71. Spinnerets: small, short and sub-terminal (Fig. 4).

TABLE I: ♀ LEG MEASUREMENTS.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
palp	1.50	0.57	0.69	—	0.94	3.70
I	2.72	1.00	2.50	2.41	0.72	9.35
II	2.13	0.84	1.56	1.81	0.63	6.97
III	1.84	0.84	1.09	1.50	0.53	5.80
IV	2.75	1.00	2.31	2.19	0.63	8.88



FIGS. 1-6: ♀ *Pitonga woolowa* (holotype). 1, cephalothorax, dorsal; 2, cephalothorax, lateral; 3, cephalothorax and mouthparts, ventral; 4, spinnerets; 5, epigynum, external; 6, epigynum, internal.  
 7-9: ♂ *Pitonga woolowa* (paratype). 7, tibia I, ventral; 8, tibia II, retrolateral; 9, I. palp, dorsal.

TABLE II ♂ LEG MEASUREMENTS

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	3.09	1.03	2.97	3.09	0.94	11.12
II	2.41	0.97	1.97	2.25	0.66	8.26
III	2.03	0.94	1.25	1.75	0.53	6.50
IV	3.38	1.06	2.50	2.47	0.75	10.16

Legs 1423 (Table I) tarsi short, about 1/3 metatarsi; hairs plumose (sensu Lehtinen). Posterior trochanters shallowly notched. Tarsus with 3 smooth claws; inferior claw long (Figs. 10, 11). Two stouter hairs lateral to it and cluster of short hairs ventral to it (Fig. 12). Between 2-4 trichobothria in irregular rows on tibiae, one long distal trichobothrium on metatarsi (Fig. 16), none on tarsi. Capsulate tarsal organ (Fig. 17) with pyriform opening.

Notation of Spines: *First leg*: Femur, p 1 distal, d 1.1.1.1. Tibia, p 1.1.1.1.1(0), v 2.2.2. Metatarsus, p 1.1.1, r 0.1.1, v 2 proximal. *Second leg*: Femur, p 1 distal, d 1.1.1. Tibia, p 0.1.1(0), v 2.1.1. Metatarsus, p 1.0.1., d 0.1.1, r 1.0.1, v 1.2.1(0). *Third leg*: Femur, d 1.1.2. Tibia, p 0.1.1, r 0.1.1, v 2(1).0.0(1). Metatarsus, scattered proximal 5-6, distal whorl 6. *Fourth leg*: Femur, d 1.1.1.1.1.1.0.0. Tibia, r 0.1.0.1, v 2.0.1.0. Metatarsus, scattered proximal 5, distal whorl 5-6.

Epigynum: The fossa has a sclerotized rim which makes it difficult to trace the course of the ducts to the spermathecae (Figs. 5, 6).

There are 4 unbranched abdominal tracheal tubes.

#### DESCRIPTION OF MALE

CL 3.18, CW 2.35, AL 3.13, AW 1.73.

Similar to female in colour, eye ratios, cheliceral teeth and trichobothrial pattern. Legs 1423 (Table II). The prolateral and ventral spines on tibia I (Fig. 7) are enlarged and there is a large ventral spur-like spine on tibia II (Fig. 8) which is presumably used during mating.

Notation of Spines. *First leg*: Femur, p 1 distal, d 1.1.1.1. Tibia, p 2(1).1.1.0(1).1.0, d 1.0.1, r 1(0).1.0(1).1, v 2.2.2.0.0. Metatarsus, p 1.0.1., v 2.2(1).1. *Second leg*: Femur, p 0.0(1).1, d 1.1.1.1. Tibia, p 0.1.0.1(spur), d 0.1.0, r 0.1.0, v 2.1.1. Metatarsus, p 1.1.1, v 2.1.1. *Third leg*: Femur, p 0.1.0, d 1.1.1.0.1, r 0.1.0. Tibia, p 0.1.1, d 0.0.1, r 0.1.1, v 2.0.0. Metatarsus, scattered proximal 6, distal whorl 6. *Fourth leg*: Femur, d

1.1.1.1.0(1).1. Tibia, p 0.1.0.1, v 2.0.1.0. Metatarsus, scattered proximal 6, distal whorl 6. Palp. Embolus thick and spear-shaped, membranous median apophysis (Fig. 13). Small prolateral posterior extension of cymbium. Elaborate tibial apophyses (Fig. 9).

The species name 'woolowa' is an Aboriginal word meaning mud flat.

#### DISCUSSION

It is difficult to decide whether characters in *Pitonga* indicate relationship to a recognised family or are specialized adaptations to the mangrove area in which the spider lives. It seems likely that the long inferior tarsal claw and lack of teeth on any of the claws are adaptations for running on mud.

Lehtinen (1980 : 493) regards the trichobothrial pattern of 2 rows on tibiae, 1 on metatarsi and none on tarsi as the plesiomorphic state; it is found in hypochiloids, haplogynes araneoids and some others. In *Pitonga* the tibial trichobothria are few and irregularly placed. The structure of the trichobothrial base and the ridged (rather than scale-like) cuticle around it, as well as the pyriform aperture of the tarsal organ, suggest amaurobioid rather than araneoid affinities (Lehtinen 1978 : 267, Forster 1980 : 273).

Spinination and copulatory spurs on the anterior tibiae of males are common in mygalomorphs and in a few araneids — several other families have metatarsal spurs. A retrolateral tibial apophysis is found in the palp of most ♂ spiders, the main exceptions being most of the araneoid spiders and the lycosids. In *Pitonga* there are 2 apophyses, the second one arises prodorsally and turns retrolaterally. Many amaurobioid spiders have complex tibial apophyses. The absence of a serrula in *Pitonga* is regarded as an apomorphy.

Although *Pitonga* resembles araneoid spiders in trichobothrial pattern and possession of tibial copulatory spurs in the male these characters are regarded as plesiomorphic and thus may not

indicate relationship. The structure of the trichobothrial base and cuticle, the pyriform opening of the tarsal organ and the plumose hairs suggest amaurobioid affinities. Many dictynoids (among the amaurobioids) show a like reduction in tarsal trichobothria. The complex tibial apophysis further supports this view and although there is no colulus the anterior spinnerets are well separated suggesting recent cribellate ancestors.

The hairiness of the legs, the long chelicerae and maxillae, and the coastal locality have influenced the provisional placing of *Pitonga* in the Desinae.

#### LITERATURE CITED

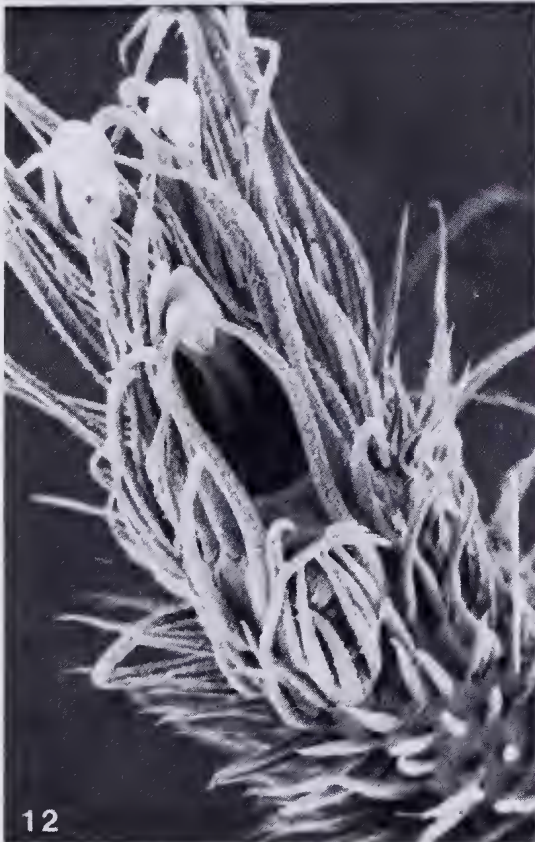
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## PLATE 1

FIGS. 10–13: *Pitonga woolowa*. 10, tarsus IV (QM S1302); 11, tarsus III claws and hairs (holotype), scale line = 71  $\mu\text{m}$ ; 12, same, ventral, scale line = 83.3  $\mu\text{m}$ ; 13,  $\delta$  palp, prolateroventral, scale line = 50  $\mu\text{m}$ .





## PLATE 2

FIGS. 14-17 *Pitonga woolowa*. 14, cheliceral teeth and process (QM S1032), scale line = 50  $\mu$ m; 15, process with pore openings, short scale line = 5  $\mu$ m; 16, trichobothrial base metatarsus III (holotype), short scale line = 12.5  $\mu$ m; 17, tarsal organ tarsus III (holotype), short scale line + 10  $\mu$ m.



